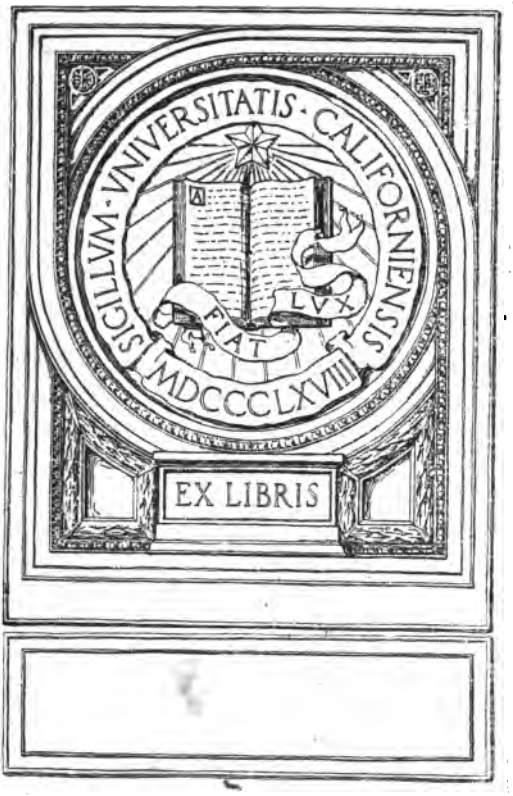
NATIONAL DRAWING COURSE

GRAMMAR-LESSONS

CROSS

GINN & COMPANY



NATIONAL DRAWING COURSE.

TEXT-BOOKS.

Free-Hand Drawing.
Mechanical Drawing.
Color Study.
Light and Shade.
Historic Ornament and Design. *(In preparation.)*

TEACHERS' MANUALS.

Outline of Drawing Lessons for Primary Grades.
Outline of Drawing Lessons for Grammar Grades.

DRAWING CARDS.

National Drawing Cards for Primary Grades.

DRAWING BOOKS.

One book each for the 4th, 5th, 6th, 7th, and 8th years of school.

SPECIAL MATERIAL FOR THE NATIONAL DRAWING COURSE.

The Cross Transparent Drawing Slate.
The Cross Pencil for use with the slate.
The National Drawing Models.
The National Model Support or Desk Easel.

National Drawing Books

OUTLINE OF DRAWING LESSONS

FOR

GRAMMAR GRADES

BY

ANSON K. CROSS

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CONTENTS.

INTRODUCTION.

THE National Course in Drawing is arranged to meet the needs of those teachers who believe that drawing should be taught for itself, and not entirely or principally for its value in other studies. Owing to the special attention given to free-hand drawing, this course will, however, prove of more value as an aid in other studies than any other course in drawing.

It is arranged with the idea that much of the time often spent in modeling, paper folding and cutting, in illustrative work, in ambidextrous exercises, and in working drawings, is wasted; and thus its chief difference from other courses is that free-hand drawing from objects is made the first subject of instruction, and for the first five or six years is, with color and arrangement study, the only work presented.

Besides postponing the scientific work to the three upper grades of the grammar school, this work is made much more simple than that in other courses. It deals with the principles underlying working drawings, and does not include unrelated details of construction, and subjects which cannot be understood by the pupils.

Free-hand drawing of objects is now generally from copies or from dictation, and must be of this nature as long as pupils are not enabled to correct their own work.

The Cross Transparent Drawing Slate is the only means ever presented which makes it possible for the pupil to correct his own errors, and thus to learn to draw. The slate renders copies unnecessary except for ornament and for the copying which is desirable, and it enables drawing from the object to be carried on in the public schools so successfully that the average pupil may be able to draw from Nature. It allows the pupils to work and think independently, and thus a widely varied line of work suited to the capacity of each

pupil may be carried on successfully, and with but slight effort on the part of the teacher, most of whose work is best performed by the slate.

The course is intended to awaken the students to the beauty in Nature and in art, and thus to make them students of Nature. It gives the elements of art instruction in such a way that pupils are prepared to continue their studies in higher schools with nothing to unlearn.

The course is arranged in such a way that teachers may vary the work to suit any special requirements. Thus less time may be spent upon color and arrangement, and more upon free-hand or working drawings; or any other variation desired may be made without difficulty.

The work in free-hand drawing may seem too difficult to those who have taught without the aid of the Cross Drawing Slate, and with it the work for any grade will be too difficult until the pupils have had the preparation of the previous grades.

The work suggested is what is desirable. It may happen that, even after the preparation of all the lower grades, only the strongest pupils of an advanced class will be able to do all the work, and some classes may not be able to do work as difficult as that suggested. This is not unexpected, and is provided for by the use of the slate and the individual models, which allow each pupil to do just what he is able, and to work independently from the tablets combined as illustrated or more simply, without causing additional work for the teacher. When drawing from common objects, if there is not time for completed work, a drawing well started is certainly better than one complete but faulty in aim and execution.

The materials for color study are expensive, and some may wish to omit the work which requires the use of colored papers and pigments.

The work in color suggested in this course combines the study of color and arrangement (design). Those who wish to omit the color may do so, and make the work the study of design simply, by using plain paper for all the exercises in cutting, folding, and pasting; and instead of colored designs in paper or pigments, the units may be used as patterns to give designs in pencil outline.

In the upper grades lessons in design, free-hand drawing, or in working drawings may be given in place of the color work. The manuals on the different subjects are arranged so that teachers may carry any subject much farther than the work suggested for the course, and perfect freedom is given for any changes desired or necessary on account of expense.

Drawing is the most difficult subject in which teachers are expected to give instruction. It is one in which the best results cannot be expected until the subject has been systematically taught for several years; for teachers must acquire knowledge of the subject, and must then discover the best methods of instruction; they must also have pupils who have been prepared for the work by that given in all the preceding grades.

It is impossible to give directions which shall be of equal value to all teachers, for conditions are so unlike in different cities and states that details of matter and arrangement must be left to teachers.

This course in drawing is not presented with the intention that the lessons are always to be given absolutely as planned as to subject or order, and no attempt is made to give directions covering every word the teacher is to say during each lesson; for it is impossible to obtain by mechanical means any satisfactory substitute for the trained intellect which must be depended upon to make any instruction successful.

This course is, however, the only one which suggests the work and the time for each lesson from the first year through the grammar school. This is done in order that teachers without experience may be assisted to plan their work, and so that they may know about what should be expected of pupils who have had proper study in the preceding grades. When pupils have not had this training, the lessons must be changed to meet the conditions.

The lessons often call for drawings of tablets; if these are not provided the forms may be cut from paper, or solid models may be used. Subjects for the lessons similar to the illustrations may thus always be obtained with little trouble.

The "Outlines of Lessons" are not intended for text-books; and teachers will find in the manuals "Free-hand Drawing," "Light and

Shade," "Color Study," "Historic Ornament and Design," and "Mechanical Drawing," the information which will assist them to carry on in their different grades the work suggested in the "Outlines of Lessons."

The authors wish to acknowledge their indebtedness for many valuable suggestions, to Elizabeth Perry, Director of Drawing, Bridgewater, Mass., and Instructor in Drawing, Bridgewater Normal School; Jessie N. Prince, Director of Drawing, Quincy and Milton, Mass.; L. Rena McLauthlin, Director of Drawing, Malden, Mass.; James Hall, Director of Drawing, Danvers, Mass.; Evelyn F. Cross, Director of Drawing, Winchester, Mass.

Teachers desiring information concerning the work of any of the grades, or relating to changes necessary to meet the requirements of their classes, should write to the publishers.

Suggestions will be thankfully received by the authors.

ANSON K. CROSS.
AMY SWAIN.

NATIONAL DRAWING COURSE.

GENERAL PLAN OF WORK.

Elementary Art Education.

- **Study of Facts.**
  - Observation.
  - Modeling.
  - Geometry.
  - Working Drawings.
  - Construction.
- **Study of Appearances.**
  - Form.
  - Light and Shade.
  - Color.
- **Study of Decoration.**
  - Historic Ornament.
  - Design or Arrangement.
    - Elementary.
    - Applied.

    Simple principles illustrated by stick and tablet laying, outline, and color, and applied in geometric and floral design, and by the use of historic details.
- **Study of Aesthetics.**
  - Study of composition and arrangement.
  - Criticism of original studies from Nature.
  - Study of modern art by means of pictures, illustrated books, and magazines.
  - Study of historic art by means of photographs and casts; study at art museums, and lectures on art.

MATERIALS FOR GRAMMAR GRADES.

Color. For color materials, see Color Manual.

Form. Large type solids for teacher.

Small type solids for pupils.

It is desirable, but not necessary, that each pupil should have a model. One-third as many models as pupils is sufficient.

Type solids :

Sphere, cube, cylinder, half-sphere, half-cube, half-cylinder, square prism, right-angled triangular prism, equilateral triangular prism, long spheroid, flat spheroid, ovoid, cone, square pyramid, hexagonal prism, hexagonal pyramid, and pentagonal prism.

Drawing. National Drawing Models.

Model supports.

Cross drawing slates and pencils.

National outfit for mechanical drawing.

Practice paper, 8″ × 10½″.

Heavy manilla paper for constructing objects.

Water color paper or substitute.

National Drawing Books, one for each year.

Hard and soft pencils of good quality.

Soft pencil erasers.

Arrangement. Small tablets.

Colored papers. See Color Manual.

Scissors.

Tracing paper.

Mucilage. A thick mucilage, made by dissolving gum arabic in cold water, is the best for public school uses.

SUGGESTIONS TO TEACHERS.

THE GLASS SLATE.

The transparent slate is to be used to test the proportions of a free-hand drawing which has been made by eye alone. It should not be used for tracing except in the theory lessons.

When the air is very damp and the slate is cold, the moisture will condense upon it, and the pencil will not mark until the slate has been rubbed with a dry cloth.

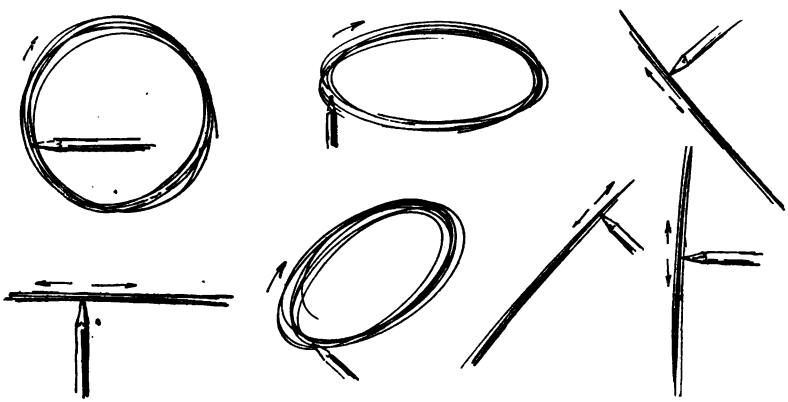
There are in a school year but few days when this trouble will occur, and it is readily remedied as explained above, or avoided by drawing on paper.

The slate should be cleaned after each lesson, as the lines are more readily removed when first drawn. A dry woolen cloth with a rough surface is the best for this purpose.

PENCILS AND PENCIL-HOLDING.

The pencils for free-hand work should be soft or medium in grade, have round points, and be used as explained in "Free-hand Drawing."

For free arm movements or sketching on the slate and paper, the pencil should be held lightly in the right hand and near the unsharpened end, which is directed towards the palm of the hand.



When drawing lines at one touch, the pencil may be held nearer the point and more firmly.

For positions of the pencil in relation to the different lines, see illustrations.

PENCIL ERASERS.

Erasers should be used as little as possible, and pupils should often be obliged to complete drawings without them. Teachers are to distribute erasers only when their use is considered necessary.

POSITIONS OF OBJECTS.

All tablets and objects constructed of them are to be placed on the pupils' desks, and drawn in whole or in part, according to the capacity of the pupil.

Large objects and groups of large objects are to be arranged on boards placed across alternate aisles, and supported by the desks. Groups must be arranged so that each pupil sees the whole of one.

NOTE. If the large wooden models are not supplied, the adjustable tablets may be used in their place for the free-hand drawing in the higher grades.

In arranging tablets and other objects for study, no care should be taken to obtain definite angles, as 60°, 45° or 30°, etc.

The simplest foreshortened position of the rectangle is when two edges appear horizontal, and when the illustrations represent this position, all the tablets of the class should be so placed, but when the illustrations show tablets at angles, the angles are not specified, and are immaterial, and each tablet may be in a different position.

POSITIONS OF SLATE AND BOOK.

In all free-hand drawing the slate should be held by the left hand, so as to be at right angles to the direction in which it is seen.

The drawing book should be secured by rubber bands to a cardboard back, so that it may be held by the left hand with its surface not foreshortened. When objects at a distance are to be drawn, the book may be placed upon the model support which is used as a desk easel and placed at the back of the desk; the first sketching may thus be at arm's length and perfectly free.

When drawings are to be accented, the book may rest upon the desk; but always in all work, sketching or accenting, the slate, book, or block should be held as nearly as possible at right angles to the direction in which it is seen.

DRAWING.

Free arm movements.

To give freedom in drawing, frequent practice in free arm movements should be given; circles, ellipses, and straight lines being drawn, as explained in "Free-hand Drawing" and illustrated on page 3 of this book.

Copying on the slate.

When drawings in the book are to be copied on the slate, the book should be fastened to the cardboard back, and placed at the back of the desk upon the model support.

Artistic methods.

All drawing should be done artistically by first suggesting in light lines the form to be represented, and strengthening the lines when the correct ones have been determined. Pupils should not be expected to draw perfect lines or represent form correctly at first touch, as this is impossible for any one.

Dictation methods should not be employed except for dictation work.

All drawings in all grades should be begun in a "sketchy" way by indicating first the principal lines and masses. If pupils begin by placing points, it will be difficult for them to change and consider the masses (the whole) in later work.

The word "sketch," when used instead of "draw," means that as much as possible of the subject is to be represented by light, free lines, which express the proportions. The detail is not to be attempted until all the principal masses are correctly placed.

Accenting.

All drawings from foliage and common objects may be accented, so as to bring out the most important features. This should be done as explained in "Free-hand Drawing."

TESTING.

Copies.

All drawings on the slate which are copied full-size from drawings in the book, may be tested by holding the slate in front of the copy so that the drawing will, as nearly as possible, coincide with the copy.

Perspective appearances.

When testing drawings upon the slate, the slate must be held at exactly right angles to the direction in which the object is seen; it will not be vertical except when the object is on the level of the eye.

The drawings involving foreshortening are to be made full-size or smaller than the object. In either case they will be tested by holding the slate so that the drawing appears, as nearly as possible, to coincide with the object. The size of the drawing which should be made depends upon that of the object and its distance from the eye. To be tested readily, the drawing should not be so large that it cannot be made to appear to coincide with the object when the slate is held at arm's length. If the drawing cannot be made to appear to coincide with the object, when the slate is held at right angles to the direction in which the object is seen, the drawing is incorrect.

When an object is at a distance, the drawing on the slate will often be too large to appear to coincide with the object; its proportions may then be obtained by the use of the measuring-rod.

It may also be tested by making a second drawing, small enough to cover the object; the proportions of this drawing may be compared with those of the larger drawing.

The drawing may also be tested by comparing the directions of its lines with those of the object, for the directions will be the same, whatever the size of the drawing, and the slate may be moved so that the directions of all the lines meeting at any point may be tested at one time.

Drawings made on paper may be tested by tracing them to the slate, and then by holding the slate and comparing in the usual manner. Drawings from copies, tablets, or solids may be made and tested in this way.

DESIGN.

Design cannot be taught; but the principles governing the arrangement and composition of materials can and should be taught, as this study will educate the taste and develop originality in the pupils.

Ornament is too generally considered to consist of natural forms either pictorially represented or conventionalized, — the word being used in the sense of a representation which simply disregards details of growth; and pupils often study with little pleasure or profit, because of a too rigid adherence to Nature.

It is claimed by many that the best ornament is not a representation of Nature, in the sense of being based upon any one particular growth, but

that it is the result of a gradual development from the earliest times, due to the feeling common to mankind which has caused the utensils of even the most savage people to be decorated.

The first decoration was that of lines which were drawn or cut by a point. The next decoration was that due to the use of a brush instead of a point. The brush gave flowing forms and masses which resembled plant forms. In time this resemblance was noted, and the designers, studying natural growths, introduced their features into the ornamental forms produced by the brush; finally came the exact representation of natural growths, which is not in accordance with the laws of good design.

If the best ornament was not produced in this way, it is certainly in harmony with this view of the subject. The study of design will be most interesting and valuable if carried on with the idea that design is the invention of pleasing forms and masses; that it is not the representation of natural growths; but that the laws which should govern its construction, and suggestions for the detail which shall make it varied and pleasing can and should be obtained by study of Nature.

Study of design naturally begins then with the arrangement of lines of different lengths, directions, and positions. After these come the arrangements of forms, which are best studied by means of the geometric tablets. The next step is the varying of these forms, which is best done by paper folding and cutting. This study will produce units similar to leaf forms. The plants suggested by these units may be studied for other units: these, combined with the first, in harmony with the laws which govern the growth of plants, will produce work as advanced as can be expected below the high school.

Study of Nature shows that Repetition, Alternation, Variety, Contrast, Symmetry, and Radiation are the important principles governing her growths. These principles must then be the fundamental laws of design.

REPETITION is the use of one unit, which is repeated without change of any kind, and usually results in monotony.

ALTERNATION is the repetition of a set of units, separated by a set of different units.

VARIETY is the result of a change in form or line.

CONTRAST is the result of juxtaposition of differing lines or forms.

SYMMETRY is the balance due to equal and opposite parts, and may result from the use of two, three, or any number of parts.

RADIATION is the arrangement of parts from a common line or point.

All good designs must illustrate the above principles, and must further harmonize with the following laws, which are based upon Nature's growths and the best historic ornament.

1. All details based upon natural growths should be conventionalized.
2. The design should present an effect of masses whose forms are distinct and pleasing, and some part should be more prominent than the others.
3. The construction lines should always harmonize with the enclosing form; in places they should repeat the lines of this form. They should not be so covered or clothed as not to be prominent in the effect of the design.
4. A design should have a growing point, to which every stem and branch may be traced.
5. All the different parts decrease in size as their distance from the growing point decreases ; thus a branch is always smaller than the one from which it proceeds.
6. The point of departure of any branch should be marked by a thickening of the stem, by a leaflet, bud, or other detail.
7. The union of all branches should be tangential.
8. Stems should be hidden in large part by foliage.
9. All pictorial or perspective effects should be avoided.

Ornament is often found in which stems grow in two directions, or in which flowers and fruit of distinctly different kinds grow from the same stem. Such violations of Nature's laws should never be allowed.

It is not, however, necessary to follow Nature literally : thus buds, flowers, and fruit may be shown in the same design, and details which are common to many plants, such as the covering of the point of departure of a stem by a leaflet, may be represented, even where the plant used is without them. In this way the plant gives the suggestion for the decorative forms which are arranged in harmony with the general laws of growth.

Steps to be followed in making an original elementary design :

1. Decide for what purpose the design is to be made, — whether for a border, surface, or radial arrangement.
2. Sketch the enclosing form.
3. Sketch the construction, or main lines of the design, with a view to the placing of the units to be used.

4. Clothe the construction lines, taking care that the laws of growth are not violated ; that the arrangement is orderly ; that there is a pleasing contrast of line and form, which gives variety ; that the various parts are well balanced ; and that the whole gives an impression of strength and unity.

5. Erase the construction and other lines not needed in the finished drawing, and line in the design and enclosing form with an even gray line.

If desired, the design or background may be half tinted. Tinting the background makes the design look smaller ; tinting the design makes it look larger.

A variety of effects may be obtained by half tinting the same design in different ways.

Designs are often called elementary and applied ; but anything which can be done in the public schools must be elementary. To make an applied design, in the sense that the design might be used as a working drawing, will require knowledge of materials, their strengths, the ways in which they are worked, and, in fact, all the technical processes involved in the production of the finished articles. This cannot be expected of pupils, though those in the upper grades may make designs for borders, simple iron work, etc., which can be "applied" in the sense of being fitted for their purpose, even if all the information necessary for the workman is not given by them.

For illustrations of design, see the design pages in the drawing books.

AIDS. — Tracing paper, ruler, compasses, or any other mechanical means may be employed in transferring designs to the drawing books.

HISTORIC ORNAMENT.

See "Historic Ornament and Design" and the pages of ornament and design in the drawing books. The study of historic ornament will be of great help in the study of design. Pupils may, while drawing ornament, be made interested in its history by short stories of the people producing it. Teachers cannot do much more with the history of art than to create an interest which may lead the pupils to a course of good reading and study.

REVIEWS.

When a special lesson is devoted to the teaching of some one thought, and this thought is not again presented, pupils will soon forget it.

Every drawing lesson affords opportunity for a review of many facts, and two or three minutes of each lesson period should be devoted to this purpose. Thus the pupils are kept familiar with all the facts presented during the year.

HOME WORK.

Pupils should be encouraged to keep and use sketch-books, for they will preserve the sketches and create interest in the drawing of objects at home and out of doors. A few reproductions of artists' sketches may be cut from papers and magazines, and pasted in their books to give suggestions for handling.

Pupils may make drawings out of school hours, from objects similar to those represented in the drawing books. Comparison of these sketches with those of the book will greatly assist the pupils.

The sketch books should be criticised occasionally by the teachers, and the best ones placed where all may see them.

Pupils may use charcoal, water color (sepia or other monochrome), pen and ink, or other mediums, out of school hours, if they desire to do so ; but they should be encouraged to use only the soft lead pencil until they are able to make good sketches with it, for they will obtain the best results from its use. If they cannot make good sketches with the pencil they cannot do as well with other mediums. Grammar grade pupils should use pen and ink only to copy the drawings of the magazines for practice in handling.

GEOMETRY.

Principles may be studied and reviews carried on by means of free-hand sketches ; but all finished drawings are to be made by the use of a straight edge and compasses. In all the problems the given, working, and result lines should be distinguished from each other by a difference in the width of line. The working lines should be light and fine ; the given lines stronger, and about as printed in the drawing books ; the result lines should be about twice the width of the given lines, and sharply cut and black. Light dotted lines may be drawn for the working lines ; if perfectly even they produce the best results ; but the difficulty of obtaining them and the time required to produce even fair results render the use of a light, fine line preferable for public school work.

All problems are explained and all required information given in " Mechanical Drawing."

WORKING DRAWINGS.

The ⊤ square, triangles, and instruments should be used in all finished work, but study of principles may be carried on by means of free-hand sketches.

The drawing book should be fastened by rubber bands to a drawing board or cardboard back, so that the ⊤ square may be used for all horizontal lines.

The objects illustrated in the drawing books should be drawn to scale. If any cannot be drawn full, half, or quarter size, or by the use of the scales provided, a special scale can be constructed, as explained in "Mechanical Drawing," by which the drawing may be made of the desired size.

The perspective illustrations in the drawing books represent objects resting upon a horizontal surface, and in front of a vertical surface. The planes of projection are to be taken parallel to these two surfaces. In other words, the view of the object seen when looking directly at the vertical surface, is to be the front view; that seen when looking directly down upon the horizontal surface, is to be the top view.

The principles of working drawings should be explained, and the pupils should then work from the object, each pupil having one. When this is not possible, perspective sketches of the object may be placed upon the blackboard and dimensioned, and the pupils may make the working drawings from these sketches. They should not be allowed to copy working drawings.

In later work the teacher may have one object, whose views may be described, drawn free-hand, and dimensioned by the pupils, who then make the instrumental drawings from their sketches.

If each pupil cannot have an object, all the work must be of this nature, and will require more time than making finished drawings directly from the object.

For mechanical work the pencil should be hard, and sharpened to a wedge-shaped point, as explained in "Mechanical Drawing."

In practical drawings invisible edges should be represented only when this is necessary to explain the construction, and in the drawings of common objects this fact should be remembered. In views of the type solids the invisible edges should be represented.

All required information on this subject is given in "Mechanical Drawing."

PAPER INSTEAD OF SLATES.

Teachers who have not obtained the slates, or who do not wish to use them as specified, may use practice paper in their place; but all teachers are advised to use the slates, as the best results cannot be obtained without them.

DAYS FOR LESSONS.

The lessons in the following outlines are supposed to be given on Monday, Wednesday, and Friday of each week.

SYNOPSIS. — FOURTH YEAR.

Plan for thirty-six weeks' work.

Time. Three thirty-minute lessons each week.

Distribution of Time.

Facts (observation)	10 lesson periods.
Free-hand drawing	66 " "
Color, Decoration	32 " "

I. Facts of Form.

1. Type Solids.
   - Review.
     - Sphere. Half-sphere.
     - Cube. Half-cube.
     - Cylinder. Half-cylinder.
     - Square prism. Right-angled triangular prism.
     - Equilateral triangular prism.
     - Long spheroid. Flat spheroid.
     - Ovoid. Cone.
     - Square pyramid. Circular plinth.
     - Square plinth.
   - Teach hexagonal prism.
2. Objects similar to the type solids.
3. Review Parts.
   - Surface.
   - Edge.
   - Corner.
   - Axis.
   - Apex.

a) Surfaces.
- Curved.
- Plane.
  - Review.
    - Circle.
      - Diameter.
      - Circumference.
      - Radius.
    - Square. Oblong.
      - Diameter.
      - Diagonal.
    - Semi-circle.
    - Triangle.
      - Right-angled.
      - Equilateral.
      - Isosceles.
    - Ellipse.
    - Oval.
    - Quadrant.
  - Teach hexagon.

b) Review Edges. { Straight. / Curved.

4. Review Locations. { Right. Above. / Left. Below. / Centre. Upper right. / Front. Lower right. / Back. Upper left. / Upper. Lower left. / Lower. } { As applied to surfaces, edges, and corners.

5. Review Positions. { Vertical. / Horizontal. / Oblique.

6. Review Relations. { Parallel. / Perpendicular. / At an angle. { Right. / Acute. / Obtuse. } } { As applied to surfaces and edges.

7. Divisions. { Review. { Bisect. / Quadrisect. / Trisect. / Teach. { Five parts. / Six parts.

8. Review Dimensions. { Length. / Breadth. / Thickness.

9. Judging the lengths of objects.

II. Construction.

1. Clay modeling.
2. Paper folding and cutting.

III. Free-hand Drawing.

1. Drawing the appearance of form when placed so that the true shape is seen.
2. Drawing the foreshortened appearance of single horizontal tablets, and of tablets combined in the form of geometric solids.
3. Drawing the appearance of large objects when placed at a distance.
4. Drawing the foreshortened appearance of single large leaves.

IV. Color.

1. Study of the spectrum.
2. Laying the spectrum chart.
3. Review of the normals, tints, and shades of the six leading colors.
4. Recognition of the normals, tints, and shades of six intermediate colors.
5. Scaling the intermediate colors in five tones.
6. Use of colored papers in design.

V. Decoration.

Principles. { Review. { Repetition. / Alternation. { Position. / Form. } / Contrast. / Variety. } / Teach. — Symmetry. }

a) Application of these principles in arrangements by drawing, and by folding and cutting to vary the geometric forms.

b) Construction of borders and rosettes of colored papers, using geometric, varied geometric, and leaf forms as units.

SYNOPSIS. — FIFTH YEAR.

Plan for thirty-six weeks' work.

Time. Three thirty-minute lessons each week.

Facts (observation)	7	lesson	periods.
Free-hand drawing	67	"	"
Model-drawing theory	4	"	"
Color / Decoration	30	"	"

I. Facts of Form.

1. Type solids. { Review the solids previously studied. / Teach { Hexagonal pyramid. / Pentagonal prism. }
2. Objects similar to type solids.
3. Review parts. { Surface. / Edge. / Corner. / Axis. / Apex. }

a. Surfaces. { Curved. / Plane. { Review the forms studied. / Teach pentagon.

b. Review edges.

4. Review locations.
5. Review positions.
6. Review relations.
7. Review divisions.
8. Review dimensions.

} As applied to surfaces and edges.

9. Judging the lengths of objects.

II. Construction.

1. Paper Folding and Cutting.

III. Free-hand Drawing.

1. Drawing the appearance of form so placed that its true shape is seen.
2. Drawing the appearance of groups of two geometric solids, made by combining tablets.
3. Drawing from large objects when placed at a distance.
4. Model-drawing theory.
5. Foliage drawing.

IV. Color.

1. Review colors previously studied.
2. Recognition of the normals, tints, and shades of the grays.
3. Scaling the grays in five tones.
4. Use of colored papers in design.

V. Decoration.

1. Review principles. Application of principles in border and radial designs, using geometric, varied geometric, and historic forms as units.

SYNOPSIS. — SIXTH YEAR.

Plan for thirty-six weeks' work.

Time. Three thirty-minute lessons each week.

Distribution of time.

Constructive drawing	26	lesson	periods.
Construction	5	"	"
Free-hand drawing	43	"	"
Model-drawing theory	4	"	"
Color } Decoration	30	"	"

I. Facts of Form.

1. Type Solids. Review the solids previously studied by sight and touch.
2. Review parts. { Surface. { Curved. / Plane. } / Edge. / Corner. / Axis. / Apex. }
3. Review locations.
4. Review positions.
5. Review relations.
6. Review divisions.
7. Review dimensions.

} As applied to surfaces and edges.

II. Constructive Drawing.

1. Geometric problems.
2. Working drawings. { Free-hand. / Instrumental. } { Geometric solids. / Common objects.

III. Construction.

1. Paper geometric forms.

IV. Free-hand Drawing.

1. Drawing the appearance of form so placed that its true shape is seen.
2. Drawing the appearance of groups of geometric solids, made by combining tablets.
3. Drawing from common objects.
4. Model-drawing theory.
5. Foliage drawing.

V. Color.

1. Recognition of six intermediate colors, normals, tints, and shades.
2. Use of the intermediate colored papers in design.
3. Scales of flat washes, representing five tones each of red, yellow, and blue pigments.
4. Scales of washes, graded from the lightest tint to the darkest shade each of red, yellow, and blue pigments.
5. Use of self-tones of red, yellow, and blue pigments in designs.

VI. Decoration.

1. Review principles.
2. Teach conventionalization. Application of principles in radial and border designs and surface decorations, using varied geometric, plant, and historic forms as units.

SYNOPSIS.—SEVENTH YEAR.

Plan for thirty-six weeks' work.

Time. Three thirty-minute lessons each week.

Distribution of time.

Constructive drawing	25	lesson	periods.
Construction	3	"	"
Free-hand drawing	60	"	"
Color, Decoration	20	"	"

I. Facts of Form.

1. Type solids. Review of the solids previously studied.
2. Review parts. Surface. (Curved. Plane.) Edge. Corner. Axis. Apex.
3. Review locations.
4. Review positions.
5. Review relations.
6. Review divisions.
7. Review dimensions.

(3–7) As applied to surfaces and edges.

II. Constructive Drawing.

1. Geometry.
2. Working drawings. (Free-hand. Instrumental.) — (Geometric solids. Common objects.)

III. Construction.

1. Paper geometric forms.

IV. Free-hand Drawing.

1. Drawing the appearance of form so placed that the true shape is seen.
2. Drawing the appearance of groups of geometric solids, placed on the desks and also at a distance.
3. Drawing from common objects, when placed at a distance.
4. Model-drawing theory.
5. Foliage drawing.

V. Color.

1. Review the grays, normals, tints, and shades.
2. Use of colored papers in design.
3. Scales of flat washes, representing five tones each of orange, green, and violet pigments.
4. Scales of washes, graded from the lightest tint to the darkest shade each, of orange, green, and violet pigments.
5. Use of pigments in design.

VI. Decoration.

1. Principles. Review principles studied. Application of principles in radial and border designs and in surface decorations, using varied geometric, plant, and historic forms as units.

SYNOPSIS. — EIGHTH YEAR.

Plan of thirty-six weeks' work.

Time. Three thirty-minute lessons each week.

Distribution of Time.

Constructive drawing	26 lesson periods.
Free-hand drawing	59 " "
Color, Decoration	23 " "

I. Facts of Form.

1. Type solids. Review the solids previously studied.
2. Review parts. Surface. (Curved. Plane.) Edge. Corner. Axis. Apex.

3. Review locations.
4. Review positions.
5. Review relations.
6. Review divisions.
7. Review dimensions.

} As applied to surfaces and edges.

II. Constructive Drawing.

1. Geometric problems.
2. Working drawings. { Free-hand. / Instrumental. } { Common objects. / Combined tablets.

III. Free-hand Drawing.

1. Drawing the appearance of form so placed that the true shape is seen.
2. Drawing the appearance of groups of geometric solids.
3. Drawing the appearance of groups of common objects.
4. Furniture drawing.
5. Interior sketches.
6. Model-drawing theory.
7. Foliage drawing.
8. Out-door sketching.

IV. Color.

1. Scales of flat washes, representing five tones each of russet, citrine, and olive pigments.
2. Scales of washes, graded from the lightest tint to the darkest shade each of citrine, olive, and russet pigments.
3. Experiments to show the effects produced by transmitted light.
4. Study of apparent color.
5. Use of pigments in design.

V. Decoration.

1. Principles. { Review principles studied. / Teach balance.
2. Conventionalization. Application of principles in elementary and applied designs.

OUTLINE OF LESSONS.

Paper if preferred may be used instead of the slate.

FOURTH YEAR.

First Week.

1. FACTS. Review sphere, half-sphere, cube, half-cube, cylinder, and half-cylinder as wholes.

2. DRAWING. Place a circular tablet horizontally, first on the desk and then on the model support, and draw on the slate.

3. DRAWING. Sketch on the slate the ornament Fig. 1 of the book.

NOTE. — All references under "Drawing" are to the pupils' drawing books.

Second Week.

1. FACTS. Review the sphere, half-sphere, cube, half-cube, cylinder, and half-cylinder as to details.
2. DRAWING. Teach reversed curve. Draw on the slate the reversed curves, book, page 1.
3. DRAWING. Draw in the book the reversed curves, page 1.

Third Week.

1. DRAWING. Draw on the slate two positions of a horizontal square tablet.

NOTE. — Lower grade pupils cannot work advantageously if not provided with individual models. The small solid models are too small for free-hand drawing. The National Drawing Models are the cheapest and best. If these are not provided, large solid models or some other substitute may be provided.

NOTE. — The lessons are supposed to be given on Monday, Wednesday, and Friday of each week.

NOTE. — The sketches given in this book are simply suggestions to the teachers of the objects to be drawn. Pupils' drawings are to be made as explained in "Free-hand Drawing."

2. DRAWING. Combine the tablets as illustrated and draw on the slate.

3. DRAWING. Combine the tablets as illustrated and draw in the book, page 2.

Fourth Week.

1. DRAWING. Combine the tablets as illustrated and draw on the slate.

2. DRAWING. Sketch on the slate the ornament Fig. 2 or 3 of the book.

3. DRAWING. Place rolling hoops and large square tablets or cards at the front of the room, so that their true shapes are seen. Draw on the slate.

Fifth Week.

1. DRAWING. First exercise in pencil measurements.

Draw upon the blackboard a heavy vertical line three feet long. About three feet to the right of this draw a second vertical line one-half as long.

Have pupils hold the measuring-rod in the right hand, and at arm's length, so that neither white end is seen.[1] Then cover the top of the shorter line with the top of the measuring-rod, and indicate its lower end with the thumb nail. Keeping the measurement on the rod, move the hand to the left, and hold the rod so the thumb-nail covers the lower end of the longer line, and observe that the top of the rod covers the middle point of the longer line.

Have the pupils trace upon the slate the two lines, and then compare the lengths of the tracings, and see that one is half as long as the other.

Draw on the board a horizontal line the length of the shorter vertical. Cover the shorter vertical line with the measuring-rod, as explained, and turn the rod so the measure of the vertical line may be compared with the horizontal. Also move the rod so that it will cover one-half of the longer vertical line. Repeat this exercise, and vary it by using the square, circle, and oblong, placed so they appear their true shapes, until the pupils can measure readily.

The pupils must sit back in their chairs and extend their arms as far as possible when measuring, so that the rod may always be the same distance from the eye.

[1] See "Free-hand Drawing," page 44.

2. DRAWING. Place large oblongs (sheets of paper or cardboard) at the front of the room, so each pupil will see the true shape of one. Obtain the proportions by pencil measurements and draw on the slate.

NOTE. — Oblongs drawn upon the blackboard may be used instead of cards.

3. DRAWING. Draw in the book, page 3, the historic ornament. Two periods.

Sixth Week.

1. DRAWING. Complete the ornament begun in the book.

2. DRAWING. Place a tumbler on each pupil's desk and draw in the book, page 2.

3. DRAWING. Place a child's hoop at the front of the room horizontally and above the level of the eye. Measure the proportions with the measuring-rod, draw on the slate, and test by holding the slate as explained.

NOTE. — A few exercises of this nature may be given to show the accuracy with which the pupils use the measuring-rod; but generally the drawing is to be made by eye and tested only when, after careful study, it is considered correct.

Seventh Week.

1. FACTS. Review vertical, horizontal, oblique, parallel, and perpendicular.

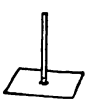
2. DRAWING. Place a hoop horizontally and draw in the book, page 4, when at each of three levels.

3. DRAWING. Combine tablets as illustrated and draw on the slate.

Eighth Week.

1. FACTS. Review diameter, diagonal, circumference, and radius. Illustrate by sketches on the slate.

2. DRAWING. Place a square and an oblong tablet horizontally at the back of each desk, and draw in the book, page 4.

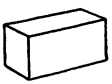


3. DRAWING. Combine a square tablet and rod, and draw in the book, page 5.

Ninth Week.

1. FACTS. Review square prism, right-angled triangular prism, and equilateral triangular prism, as to wholes and parts.
2. DRAWING. Sketch on the slate the curves of the book, page 6.
3. DRAWING. Sketch on the slate the ornament Fig. 4, 5, or 6 of the book.

Tenth Week.



1. DRAWING. Combine the tablets as illustrated, and draw on the slate the whole or part of the object.

2. DRAWING. Combine the tablets as illustrated, and draw in the book, page 5. The rod may be vertical or horizontal.

3. DRAWING. Combine the tablets as desired, and draw on the slate.

Eleventh Week.

1. FACTS. Review angles and triangles.
2. } DRAWING. Draw in the book the curves, page 6.
3. }

Twelfth Week.

1. DRAWING. Combine the tablets to form a cube, and draw in the book, page 7.

2. DRAWING. Place grape or cheese boxes, or any cylindrical objects, on boards across the aisles, and draw on the slate.

3. DRAWING. Repeat the last lesson, drawing in the book, page 7.

Thirteenth Week.

1. FACTS. Review spheroids, ovoid, ellipse, and oval.
2. } DRAWING. Draw in the book the historic ornament, page 8.
3. }

Fourteenth Week.

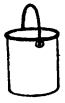
1. DRAWING. Place single large vegetables on boards across the aisles, and sketch on the slate.

2. DRAWING. Place pumpkins on boards across the aisles, and draw in the book, page 9.

3. DRAWING. Sketch upon the slate the ornament, Fig. 7 of the book.

Fifteenth Week.

1. FACTS. Review square pyramid and cone as to wholes and parts.



2. DRAWING. Place tin pails on boards across the aisles, and draw in the book, page 9.

3. DRAWING. Combine the tablets as illustrated, and draw in the book, page 10.

Sixteenth Week.

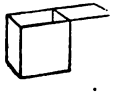
1. FACTS. Teach hexagonal prism and hexagon.

2. DRAWING. Place the hexagonal tablet so its true shape is seen, and draw on the slate. If there is time draw in two positions.

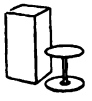
3. DRAWING. Place groups of two large vegetables on boards across the aisles, and sketch on the slate.

Seventeenth Week.

1. DRAWING. Combine the tablets as illustrated, and draw on the slate.



2. DRAWING. Combine the tablets as illustrated, and draw in the book, page 10.



3. DRAWING. Combine the tablets to form the objects illustrated, and draw both, or one, on the slate.

Eighteenth Week.

1. FACTS. Review hexagonal prism and hexagon.

2. DRAWING. Sketch upon the slate the ornament Fig. 8 or 9 of the book.

3. DRAWING. Combine the tablets as illustrated, and draw in the book, page 11.

Nineteenth Week.

1. DRAWING. Draw in the book, page 11, from large objects, similar to that illustrated.

2. DRAWING. Combine tablets as illustrated, and draw in the book, page 12.

3. DRAWING. The same object, with three surfaces visible. Draw in the book, page 12.

Twentieth Week.

1. } DRAWING. Combine tablets as illustrated, and draw in the
2. } book, page 13.

3. DRAWING. Sketch on the slate the curves of the book, page 14.

Twenty-first Week.

1. DRAWING. Place grape baskets on boards across the aisles, and draw on the slate.

2. DRAWING. Repeat Monday's lesson, drawing in the book, page 13.

3. DRAWING. Draw in the book the curves, page 14. Two periods.

Twenty-second Week.

1. DRAWING. Complete the curves begun in the book.

2. } DRAWING. Draw in the book the historic ornament, page 15.
3. }

Twenty-third Week.

1. } DRAWING. Draw in the book, page 16, a group of two objects.
2. }

3. DRAWING. Draw in the book, page 17, a group of two objects. Two periods.

Twenty-fourth Week.

1. DRAWING. Complete the group begun in the book.

2. FOLDING AND CUTTING. Cut a 3″ square from practice paper. Fold on its diagonals and diameters. Vary the form by first drawing and then cutting.

Suggestions.

3. DRAWING. Make an original variation of an isosceles triangle of 4″ altitude. Draw in the book, page 18.

Twenty-fifth Week.

1. DRAWING. Sketch on the slate a radial design, using the varied triangle as unit.

2. } DRAWING. Using the varied isosceles triangle drawn Friday, as a
3. } unit, repeat for a radial design, inscribed in a 4″ square. Draw in the book, page 18.

Twenty-sixth Week.

1. DESIGN. Talk by the teacher on the way in which historic ornament may be used to form a border design. Illustrate by sketches on the blackboard.
2. DRAWING. Sketch on the slate a border design, using some bit of historic ornament as unit.
3. DRAWING. Sketch on the slate a border design, using a varied square as unit.

Twenty-seventh Week.

1. DRAWING. Lay an original radial arrangement of tablets on the desk. Sketch on the slate, and enclose in a square or circle.

2. } DRAWING. Make a simple arrangement of tablets, and draw in the
3. } book, page 19.

Twenty-eighth Week.

1. DRAWING. Using some bit of historic ornament as unit, sketch a border arrangement on the slate.
2. COLOR. Color Manual, Lesson 1.
3. COLOR. Color Manual, Lesson 2.

Twenty-ninth Week.

1. FOLDING AND CUTTING. Color Manual, Lesson 3.
2. COLOR. Color Manual, Lesson 4.
3. CUTTING. Color Manual, Lesson 5.

Thirtieth Week.

1. PASTING. Color Manual, Lesson 6.
2. COLOR. Color Manual, Lesson 7.
3. COLOR. Color Manual, Lesson 8.

Thirty-first Week.

1. FOLDING AND CUTTING. Color Manual, Lesson 9.
2. COLOR. Color Manual, Lesson 10.
3. CUTTING. Color Manual, Lesson 11.

Thirty-second Week.

1. PASTING. Color Manual, Lesson 12.
2. } MAKING A NEEDLE-BOOK. Color Manual, Lessons 13 and 14.
3. }

Thirty-third Week.

1. DRAWING. Place single large leaves horizontally at the back of the desk, and sketch on the slate. If there is time, have pupils exchange leaves and draw again.
2. DRAWING. Sketch on the slate some leaf or sprouted seed which has been studied in connection with botany.

Suggestions.

3. DRAWING. Each pupil bring a leaf, simple in outline, and place on the model support so its true shape is seen. Draw in the book, page 19. Also draw a bisymmetric unit similar to this leaf.

Thirty-fourth Week.

1. DRAWING. Place single large leaves horizontally at the back of the desk, and draw in the book, page 20.
2. DRAWING. Place single leaves or pods in any natural position, and sketch on the slate.
3. DRAWING. Draw in the book, page 20, from a leaf or pod in any natural position.

Thirty-fifth Week.

1. COLOR. Color Manual, Lesson 15.
2. COLOR. Color Manual, Lesson 16.
3. FOLDING AND CUTTING. Color Manual, Lesson 17.

Thirty-sixth Week.

1. COLOR. Color Manual, Lesson 18.
2. CUTTING. Color Manual, Lesson 19.
3. PASTING. Color Manual, Lesson 20.

OUTLINE OF LESSONS.

Paper if preferred may be used instead of the slate.

FIFTH YEAR.

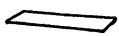
First Week.

1. FACTS. Review the sphere, cube, cylinder, half-sphere, half-cube, and half-cylinder.
2. DRAWING. Place a large hoop horizontally and at two or more levels, and draw on the slate. Test by use of the measuring-rod, and if the drawing is not too large, test again by holding the slate so that the drawing appears to cover the object.

3. DRAWING. Sketch on the slate the curves in the book, page 1.

NOTE. — All references under "Drawing" are to the pupils' drawing books.

Second Week.



1. DRAWING. Place a card horizontally and at two levels. Draw on the slate.

2. DRAWING. Draw in the book the curves, page 1.

3. DRAWING. Draw in the book, page 2, from dictation.

Third Week.

1. } DRAWING. Theory. Book, page 3. See "Free-hand Drawing," Les-
2. } sons I and II, pages 56 and 57.

If there is time, draw on the slate a horizontal circular tablet when at each of three levels.

3. DRAWING. Sketch on the slate the ornament Fig. 10, 11, or 12.

Fourth Week.

1. FACTS. Review the prisms, square pyramid, and cone.
2. } DRAWING. Draw in the book the historic ornament, page 4.
3. }

Fifth Week.

1. DRAWING. Combine the tablets as illustrated and draw in the book, page 5.
2. FACTS. Teach hexagonal pyramid, whole and parts. Review hexagon and isosceles triangle.

3. DRAWING. Place the hexagonal tablet as illustrated, and draw on the slate.

Sixth Week.

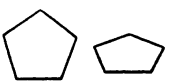
1. DRAWING. Draw in the book, page 5, the horizontal hexagonal tablet.

2. DRAWING. Combine tablet and rod as illustrated, and draw in the book, page 6.

3. DRAWING. Combine the tablets as illustrated, and draw on the slate.

Seventh Week.

1. DRAWING. Combine the tablets as in Friday's lesson and draw in the book, page 6.
2. FACTS. Teach pentagonal prism. Teach pentagon.



3. DRAWING. Draw on the slate the pentagonal tablet, first placed so its true shape is seen; then placed horizontally on the desk.

Eighth Week.

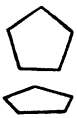
1. DRAWING. Place groups of two pieces of fruit or vegetables on boards across the aisles and sketch on the slate.

2. DRAWING. Place single large vegetables on boards across the aisles and draw in the book, page 7.

3. DRAWING. Place groups of two pieces of fruit on boards across the aisles and draw in the book, page 7.

Ninth Week.

1. DRAWING. Combine the tablets as illustrated and draw on the slate.
2. DRAWING. Combine the tablets as in Monday's lesson and draw in the book, page 8.



3. DRAWING. Draw in the book, page 8, the pentagonal tablet, first placed so its true shape is seen, and then horizontally on the desk.

Tenth Week.

1. FACTS. Teach spiral curves, and draw large spiral curves on the slate from copy placed on the board, or from the book, page 12.
2. DRAWING. Sketch on the slate the curves of the book, page 12.
3. DRAWING. Sketch on the slate the ornament Fig. 13 or 14.

Eleventh Week.

1. DRAWING. Theory. Book, page 9. See "Free-hand Drawing," Lesson III, page 57.

2. DRAWING. Place circular and square tablets horizontally at the back of the desk and draw on the slate.

3. DRAWING. Combine tablets to form the group illustrated and draw on the slate.

Twelfth Week.

1. DRAWING. Drill exercise in obtaining proportions from large cards placed at a distance so as to appear their true shapes. If preferred, large drawings may be made on the blackboard. Draw on the slate, then measure with the rod and test as explained.

2. DRAWING. Place water pails on boards across the aisles and draw in the book, page 10.

3. DRAWING. Draw in the book, page 2, from dictation.

Thirteenth Week.

1. } DRAWING. Combine tablets and arrange as illustrated. Draw
2. } in the book, page 10.

3. MODELING. Have each pupil model a 2″ sphere as perfectly as possible. Cut off a section with wire, as illustrated. Keep for Monday's drawing lesson.

Fourteenth Week.

1. DRAWING. Draw on the slate from the sectioned sphere. Small Japanese baskets may be used for this lesson, if desired.

2. DRAWING. Sketch on the slate the ornament, Fig. 15 or 16.

3. DRAWING. Test pupils' knowledge of the appearance of form by memory sketches of the square and circular tablets, or of the cube or cylinder. Have them first sketch on the slate and then test by holding the slate between the eye and the object, and moving the object and slate until the edges of the object appear to coincide with the lines of the drawing. If the drawing represents a possible appearance of the object, a position of the object and slate may be found in which the drawing appears to coincide with the object.

NOTE. — This interesting exercise may be repeated, using any of the forms studied, as often as the pupils have a few unoccupied minutes.

Fifteenth Week.

1. } DRAWING. Draw in the book the historic ornament, page 11.
2. }

3. DRAWING. Draw in the book the curves on page 12. Two periods.

Sixteenth Week.

1. DRAWING. Complete the drawing begun in the book.
2. DRAWING. Theory. Book, page 13. See "Free-hand Drawing," Lesson IV, page 58.
3. DRAWING. Sketch on the slate the curves in the book, page 14.

Seventeenth Week.

1. DRAWING. Combine the tablets as illustrated, and draw on the slate.

2. } DRAWING. Combine the tablets as for Monday's lesson, and draw in
3. } the book, page 12.

Eighteenth Week.

1. FACTS. Review hexagonal pyramid and pentagonal prism, wholes and parts.
2. DRAWING. Sketch on the slate the historic ornament Fig. 17, 18, or 19.

3. DRAWING. Sketch on the slate from single vases placed on boards across the aisles.

Nineteenth Week.

1. DRAWING. Combine tablets as illustrated, and draw on the slate.

2. } DRAWING. Combine tablets as for Monday's lesson, and draw in the
3. } book, page 14.

Twentieth Week.

1. } DRAWING. Draw in the book the curves, page 14.
2. }

3. DRAWING. Test pupils' knowledge of the principles of perspective. Sketch on the slate from memory, and test as explained the fourteenth week.

Twenty-first Week.

1. DRAWING. Theory. Book, page 15. See "Free-hand Drawing," Lesson V, page 59.

2. } DRAWING. Draw in the book the historic ornament, page 16.
3. }

Twenty-second Week.

1. } DRAWING. Combine tablets as illustrated, and draw in the
2. } book, page 17.

3. DRAWING. Place groups of two large objects on boards across the aisles, and sketch on the slate.

Twenty-third Week.

1. } DRAWING. Arrange the group sketched Friday, and draw in the book,
2. } page 17.

3. DRAWING. Review the principles of perspective by memory sketches on the slate. See Fourteenth Week.

Twenty-fourth Week.

1. FACTS. A general review of the type solids, giving special attention to those studied this year.

2. } DRAWING. Place groups of objects on boards across the aisles, and
3. } draw in the book, page 18.

Twenty-fifth Week.

1. FOLDING AND CUTTING. An illustrated talk by the teacher on folding and cutting to vary the geometric forms. See "Color Study," Part II, "Paper Folding and Cutting."

Suggestion.

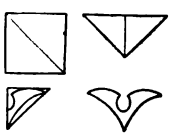
2. FOLDING AND CUTTING. Cut the kite form from practice paper. Fold on the axis and vary by drawing. Cut and reserve.

3. DESIGN. A talk by the teacher on the principles of good design and the way in which varied geometric forms may be used to form border and radial designs. Illustrate by sketches on the blackboard.

Twenty-sixth Week.

Suggestion.

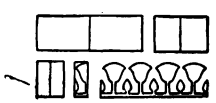
1. } DRAWING. Make a radial arangement, using the varied
2. } kite form as unit. Use a square as an enclosing form, and draw in the book, page 19.



Suggestions.

3. FOLDING AND CUTTING. Trace around a $2\frac{1}{2}''$ square tablet on practice paper and cut. Fold on one diagonal and cut. Fold one of the triangles thus formed, and make an original variation by cutting.

Twenty-seventh Week.



Suggestions.

1. FOLDING AND CUTTING. Cut an oblong $3'' \times 9''$ from practice paper, and fold three times, as illustrated. Draw a variation, cut and unfold.

2. DRAWING. Sketch on the slate a radial arrangement, using some bit of historic ornament as unit.

3. COLOR. Color Manual, Lesson 1.

Twenty-eighth Week.

1. COLOR. Color Manual, Lesson 2.
2. FOLDING AND CUTTING. Color Manual, Lesson 3.
3. COLOR. Color Manual, Lesson 4.

Twenty-ninth Week.

1. CUTTING AND PASTING. Color Manual, Lesson 5.
2. } CONSTRUCTION. Color Manual, Lessons 6 and 7.
3. }

Thirtieth Week.

1. COLOR. Color Manual, Lesson 8.
2. COLOR. Color Manual, Lesson 9.
3. CUTTING. Color Manual, Lesson 10.

Thirty-first Week.

1. COLOR. Color Manual, Lesson 11.
2. CUTTING. Color Manual, Lesson 12.
3. PASTING. Color Manual, Lesson 13.

Thirty-second Week.

1. DRAWING. Place a small spray of foliage of one or two leaves in any natural position, and sketch on the slate.
2. DRAWING. Place a spray of foliage with one or two leaves in any natural position, and draw in the book, page 19.

3. DRAWING. Sketch on the slate from single blossoms placed in any natural position.

Thirty-third Week.

1. DRAWING. Place single flowers in any natural position, and sketch on the slate.
2. } DRAWING. Place a spray of foliage with one or two leaves in any
3. } natural position, and draw in the book, page 20. Also draw a unit for design similar to the leaf.

Thirty-fourth Week.

1. } DRAWING. Draw a 4″ equilateral triangle in the book, page
2. } 20. Draw axes of symmetry, and on these lines sketch the unit drawn Friday. Erase and line in.
3. COLOR. Color Manual, Lesson 14.

Thirty-fifth Week.

1. COLOR. Color Manual, Lesson 15.
2. COLOR. Color Manual, Lesson 16.
3. CUTTING. Color Manual, Lesson 17.

Thirty-sixth Week.

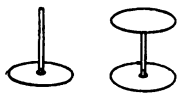
1. COLOR. Color Manual, Lesson 18.
2. CUTTING. Color Manual, Lesson 19.
3. PASTING. Color Manual, Lesson 20.

OUTLINE OF LESSONS.

Paper if preferred may be used instead of the slate.

SIXTH YEAR.

First Week.



1. DRAWING. Combine tablets as illustrated, and draw on the slate.
2. DRAWING. Sketch on the slate the historic ornament, Fig. 20, 21, or 22.

3. DRAWING. Combine tablets as illustrated, and draw on the slate.

NOTE. — All references under "Drawing" are to the pupils' drawing books.

Second Week.

1. DRAWING. Theory. Book, page 10. See "Free-hand Drawing," Lesson VI, page 59.
2. DRAWING. Combine tablets, and draw on the slate.

3. DRAWING. Combine the tablets as desired, and draw on the slate.

Third Week.

1. DRAWING. Combine tablets as illustrated, and draw on the slate.

2. } DRAWING. Arrange objects as in Monday's lesson, and
3. } draw in the book, page 11.

Fourth Week.

1. } DRAWING. Draw in the book the historic ornament, page 12.
2. }

3. DRAWING. Place a hoop and large cards horizontally at the front of the room and above the level of the eye. Draw on the slate.

Fifth Week.

1. DRAWING. Combine tablets as illustrated, and draw on the slate.

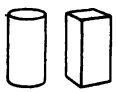
2. } DRAWING. Combine the tablets as in Monday's lesson, and
3. } draw in the book, page 11.

Sixth Week.

1. DRAWING. Sketch on the slate the historic ornament Fig. 23, 24, or 25.
2. DRAWING. Theory. Book, page 13. See "Free-hand Drawing," Lesson VII, page 60.

3. DRAWING. Place the object illustrated on the desk, and draw in the book, page 13.

Seventh Week.



1. DRAWING. Place 8″ cylinders and square prisms on boards across the aisles, and draw on the slate.

2. DRAWING. Place large square prisms, as for Monday's lesson, and draw in the book, page 14.

3. DRAWING. Place large square prisms horizontally, and draw in the book, page 14.

Eighth Week.

1. GEOMETRY. Explain the use of the ruler and compasses. Draw concentric circles of given diameters and work Problem 1 on practice paper.

   For problems and directions see "Mechanical Drawing."
2. GEOMETRY. Problems 1 and 2. Book, page 1.
3. GEOMETRY. Problems 3 and 4. Book, page 1.

Ninth Week.

1. GEOMETRY. Problems 5 and 6. Book, page 1.
2. GEOMETRY. Problems 7 and 8. Book, page 2.
3. GEOMETRY. Problems 9 and 10. Book, page 2.

Tenth Week.

1. GEOMETRY. Problems 11 and 12. Book, page 2.
2. WORKING DRAWINGS. Free-hand on the slate. This exercise is to teach the pupils what is meant by working drawings, and to familiarize them with different views of common objects. Teach the positions of different views. Objects: sphere, cube, and cylinder. See "Mechanical Drawing," Figs. 39, 41, and 45.
3. WORKING DRAWINGS. Free-hand on the slate. Objects: square prism, square pyramid, and triangular prism. See "Mechanical Drawing," Figs. 42, 49, and 46.

Eleventh Week.

1. WORKING DRAWINGS. Explain the uses of the ⊤ square and triangles. Book, page 3. Front and top views of a sphere.
   Front and top views of a hemisphere.
   See "Mechanical Drawing," Figs. 39 and 40.

2. } WORKING DRAWINGS. Book, page 4. Front and top views of a
3. } cube. Develop on heavy paper the surface of the cube, placing laps for pasting. See "Mechanical Drawing," Fig. 41.

Twelfth Week.

1. CONSTRUCTION. Cut the development, and paste to form a cube.

2. } WORKING DRAWINGS. Book, page 4. Front and top views of a
3. } square prism. Develop the surface, placing laps for pasting. See "Mechanical Drawing," Fig. 42.

Thirteenth Week.

1. CONSTRUCTION. Cut the development, and paste to form the square prism.
2. WORKING DRAWINGS. Book, page 5. Front, top, and right side views of a square tablet.
   Front and top views of an oblong tablet.
   See "Mechanical Drawing," Figs. 43 and 44.
3. WORKING DRAWINGS. Book, page 6. Front and left side views of a horizontal cylinder. See "Mechanical Drawing," Fig. 45.

Fourteenth Week.

1. WORKING DRAWINGS. Develop the surface of the cylinder, placing laps for pasting. See "Mechanical Drawing," Fig. 45.

2. CONSTRUCTION. Cut the development, and paste to form the cylinder.
3. WORKING DRAWINGS. Book, page 6. Front and left side views of a horizontal equilateral triangular prism. See "Mechanical Drawing," Fig. 46.

Fifteenth Week.

1. WORKING DRAWINGS. Develop the surface of the triangular prism, placing laps for pasting. See "Mechanical Drawing," Fig. 46.
2. CONSTRUCTION. Cut the development, and paste to form the triangular prism.
3. WORKING DRAWINGS. Book, page 7. Front and top views of a circular tablet.

Front and top views of an equilateral triangular tablet.

See "Mechanical Drawing," Figs. 47 and 48.

Sixteenth Week.

1. } WORKING DRAWINGS. Book, page 7. Front and top views of a
2. } square pyramid. Develop the surface, placing laps for pasting. See "Mechanical Drawing," Fig. 49.
3. CONSTRUCTION. Cut the development, and paste to form the square pyramid.

Seventeenth Week.

1. WORKING DRAWINGS. Book, page 8. Front and top views of a tumbler. See "Mechanical Drawing," Fig. 50.
2. WORKING DRAWINGS. Book, page 8. Front and top views of a cookie cutter. See "Mechanical Drawing," Fig. 51.
3. WORKING DRAWINGS. Book, page 9. Front and top views of a cylindrical box. See "Mechanical Drawing," Fig. 52.

Eighteenth Week.

1. WORKING DRAWINGS. Book, page 9. Front and top views of a tin dipper. See "Mechanical Drawing," Fig. 53.

2. DRAWING. Draw on the slate from large cubes placed on boards across the aisles.

3. DRAWING. Draw on the slate from the large objects illustrated.

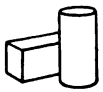
Nineteenth Week.

1. } DRAWING. Draw in the book the historic ornament, page 15.
2. }

3. DRAWING. Theory. Book, page 16. See "Free-hand Drawing," Lesson VIII, page 61.

Twentieth Week.

1. DRAWING. Draw in the book, page 16, the large triangular prism.



2. } DRAWING. Draw in the book, page 17, from the large
3. } objects illustrated.

Twenty-first Week.

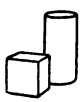
1. DRAWING. Sketch on the slate the historic ornament Fig. 26, 27, 28, 29, or 30.

2. DRAWING. Place large cylinders above the eye, and draw on the slate.

3. DRAWING. Place square prisms above the eye, and draw on the slate.

Twenty-second Week.

1. DRAWING. Place large vases at a distance, and draw in the book, page 17.



2. DRAWING. Theory. Book, page 18. See "Free-hand Drawing," Lesson IX, page 61.
3. DRAWING. Draw on the slate the large objects illustrated.

Twenty-third Week.

1. } DRAWING. Draw in the book, page 19, the historic ornament.
2. }

3. DRAWING. Test the pupils' knowledge of the principles of perspective by memory drawings on the slate. (See Fourteenth Week, Fifth Year.)

Twenty-fourth Week.

1. DRAWING. Arrange a group of two large objects, and sketch on the slate.

2. } DRAWING. Rearrange the group drawn Monday, and
3. } draw in the book, page 20.

Twenty-fifth Week.

1. DRAWING. Place a hoop and large square horizontally above the eye, and draw in the book, page 21.

2. DRAWING. Place a large cylinder above the eye, and draw in the book, page 21.

3. COLOR. Color Manual, Lesson 1.

Twenty-sixth Week.

1. } COLOR. Color Manual, Lessons 2 and 3.
2. }

3. COLOR. Color Manual, Lesson 4.

Twenty-seventh Week.

1. COLOR. Color Manual, Lesson 5.

2. } COLOR. Color Manual, Lessons 6 and 7.
3. }

Twenty-eighth Week.

1. } COLOR. Color Manual, Lessons 8 and 9.
2. }

3. COLOR. Color Manual, Lesson 10.

Twenty-ninth Week.

1. COLOR. Color Manual, Lesson 11.
2. DESIGN. Talk by the teacher on the principles of decoration. Show the pupils examples of good design. See manual on design.

3. DRAWING. Place a spray of foliage so the leaves are seen as nearly as possible their true shapes, and sketch on the slate.

Thirtieth Week.

1. DRAWING. Draw a spray of ivy; also a unit for design similar to the ivy leaf. Book, page 22.

NOTE. — Ask pupils to hand in for criticism on Friday sketches for border designs, using the unit designed.

2. DRAWING. Pupils bring single flowers with three, four, or five petals, and draw the face views in the book, page 23.

Suggestion.

3. DRAWING. Make a sketch on the slate of a rosette, suggested by the face view of the flower drawn.

NOTE. — Criticise border designs, and have them ready for use next Wednesday.

Thirty-first Week.

1. DRAWING. Place sprays of foliage so the leaves appear as nearly as possible their true shapes, and draw in the book, page 24.

NOTE. — Ask pupils to bring in for criticism next Monday sketches for surface decorations, the units suggested by face views of flowers.

2. } DRAWING. Draw in the book, page 22, the border design.
3. }

Thirty-second Week.

1. } DRAWING. Draw in the book, page 23, a rosette, suggested by the
2. } face view of the flower last drawn.

NOTE. — Surface designs to be criticised and ready for use Friday.

3. DRAWING. Draw in the book, page 24, the surface design. Two periods.

Thirty-third Week.

1. DRAWING. Complete the design begun Friday.
2. CUTTING. Color Manual, Lesson 12.
3. COLOR. Color Manual, Lesson 13.

Thirty-fourth Week.

1. CUTTING. Color Manual, Lesson 14.
2. PASTING. Color Manual, Lesson 15.
3. COLOR. Color Manual, Lesson 16.

Thirty-fifth Week.

1. COLOR. Color Manual, Lesson 17.
2. } DESIGN. Color Manual, Lessons 18 and 19.
3. }

Thirty-sixth Week.

1. }
2. } COLOR. Color Manual, Lessons 20, 21, and 22.
3. }

OUTLINE OF LESSONS.

Paper if preferred may be used instead of the slate.

SEVENTH YEAR.

First Week.

1. DRAWING. Sketch on the slate the historic ornament, Fig. 31, 32, or 33.

2. DRAWING. Combine tablet and rod as illustrated, and draw on the slate.

3. DRAWING. Combine tablets as illustrated, and draw on the slate.

NOTE. — All references under "Drawing" are to the pupils' drawing books.

Second Week.

1. DRAWING. Combine tablets as illustrated, and draw on the slate.

2. } DRAWING. Combine tablets as on Monday, and draw in the book,
3. } page 8.

Third Week.

1. DRAWING. Combine tablets to form a triangular prism, and place with any small common object. Draw on the slate.

2. } DRAWING. Rearrange the objects drawn Monday, and draw in the
3. } book, page 8.

Fourth Week.

1. DRAWING. Theory. Book, page 9. See "Free-hand Drawing," Lesson X, page 62.

2. } DRAWING. Draw in the book the historic ornament, page 10.
3. }

Fifth Week.

1. DRAWING. Combine the tablets as illustrated, and draw on the slate.

2. DRAWING. Sketch on the slate the historic ornament, Fig. 34, 35, or 36.

3. DRAWING. Have pupils bring salt shakers, and place on the desks with tablets as illustrated. Sketch on the slate. By exchanging objects, two sketches may be made.

Sixth Week.

1. } DRAWING. Arrange groups as illustrated, and draw in the
2. } book, page 11.

3. DRAWING. Place groups of fruit or vegetables on boards across the aisles, and sketch on the slate.

Seventh Week.

1. } DRAWING. Theory. Book, page 12. See "Free-hand Drawing,"
2. } Lesson X, page 62.

3. DRAWING. Test pupils' knowledge of principles of perspective by memory drawings, on the slate, of single objects. See Fourteenth Week, Fifth Year.

Eighth Week.

1. GEOMETRY. Free-hand review of the problems studied the Sixth Year.
2. GEOMETRY. Problem 13. Book, page 1. See "Mechanical Drawing" for explanations of the problems.
3. GEOMETRY. Exercise on the use of the triangles to obtain parallels; also Problem 14. Book, page 1.

Ninth Week.

1. }
2. } GEOMETRY. Problems 15, 16, 17, and 18. Book, page 1.
3. }

Tenth Week.

1. } WORKING DRAWINGS. Book, page 2. Top and front views of an
2. } hexagonal prism. Develop the surface of the prism, placing laps for pasting. See "Mechanical Drawing," Fig. 54.

3. CONSTRUCTION. Cut and paste to form the hexagonal prism.

Eleventh Week.

1. } WORKING DRAWINGS. Book, page 2. Top and front views of an
2. } hexagonal pyramid. Draw the development, placing laps for pasting. See "Mechanical Drawing," Fig. 55.
3. CONSTRUCTION. Cut and paste to form the hexagonal pyramid.

Twelfth Week.

1. } WORKING DRAWINGS. Book, page 3. Top and front views of a
2. } cone. Draw the development, placing laps for pasting. See "Mechanical Drawing," Fig. 56.
3. CONSTRUCTION. Cut the development and paste to form the cone.

Thirteenth Week.

1. WORKING DRAWINGS. Book, page 3. Front, top, and right-side views of an hexagonal tablet. See "Mechanical Drawing," Fig. 57.
2. WORKING DRAWINGS. Book, page 4. Top and front views of a tunnel. See "Mechanical Drawing," Fig. 58.
3. WORKING DRAWINGS. Book, page 4. Front and top views of a grater. See "Mechanical Drawing," Fig. 59. Two periods.

Fourteenth Week.

1. WORKING DRAWINGS. Complete the views of the grater.

2. } WORKING DRAWINGS. Front, top, and right-side views of a box.
3. } First, free-hand working drawings with dimensions; second, finished drawings in the book, page 5. See "Mechanical Drawing," Fig. 60.

Fifteenth Week.

1. } WORKING DRAWINGS. Book, page 6. Top and front views of an
2. } oil cup. See "Mechanical Drawing," Fig. 61.
3. WORKING DRAWINGS. Book, page 6. Top and front views of a call-bell. See "Mechanical Drawing," Fig. 62. Two periods.

Sixteenth Week.

1. WORKING DRAWINGS. Complete the views of the bell.
2. WORKING DRAWINGS. Free-hand working drawings with dimensions. Front view and longitudinal and cross sections of a hollow cylinder. See "Mechanical Drawing," Fig. 63.
3. WORKING DRAWINGS. Book, page 7. Begin the finished drawings of the hollow cylinder. Two periods.

Seventeenth Week.

1. WORKING DRAWINGS. Complete and dimension the working drawings of the hollow cylinder.

2. DRAWING. Combine tablets as illustrated, and draw on the slate.

3. DRAWING. Combine tablets as illustrated, and draw the group, or two objects on the slate.

Eighteenth Week.

1. } DRAWING. Combine the tablets as illustrated, and draw
2. } in the book, page 11.

3. DRAWING. Draw on the slate the large object illustrated.

Nineteenth Week.

1. DRAWING. Combine tablets as illustrated, and draw on the slate.

2. } DRAWING. Rearrange the objects drawn Monday, and
3. } draw in the book, page 13.

Twentieth Week.

1. DRAWING. Draw in the book, page 13, the large object illustrated.
2. DRAWING. Theory. Book, page 14. See "Free-hand Drawing," Lesson XI, page 64.

3. DRAWING. Sketch on the slate the large objects illustrated.

Twenty-first Week.

1. } DRAWING. Draw in the book the historic ornament, page 15.
2. }

3. DRAWING. Sketch on the slate the historic ornament, Fig. 37, 38, or 39.

Twenty-second Week.

1. DRAWING. Place large objects above the level of the eye, and draw on the slate.

2. DRAWING. Draw in the book, page 16, the large cylinder.

3. DRAWING. Combine tablets as illustrated, and draw on the slate.

Twenty-third Week.

1. } DRAWING. Combine the tablets as in Friday's lesson, and draw in
2. } the book, page 16.

3. DRAWING. Theory. Book, page 17. See "Free-hand Drawing," Lesson XII, page 64.

Twenty-fourth Week.

1. DRAWING. Test the pupils' knowledge of the principles of perspective by memory sketches on the slate. See Fourteenth Week, Fifth Year.

2. } DRAWING. Place the large objects illustrated above the
3. } level of the eye, and draw in the book, page 18.

Twenty-fifth Week.

1. } DRAWING. Draw in the book the historic ornament, page
2. } 19.

3. DRAWING. Place groups of two objects on boards across the aisles, and draw in the book, page 20. Two periods.

Twenty-sixth Week.

1. DRAWING. Complete the drawing begun in the book.

2. } DRAWING. Place large objects above the level of the eye,
3. } and draw in the book, page 18.

Twenty-seventh Week.

1. } DRAWING. Place groups of large objects on boards across
2. } the aisles, and draw in the book, page 21.

3. COLOR. Color Manual, Lesson 1.

Twenty-eighth Week.

1. COLOR. Color Manual, Lesson 2.

2. } COLOR. Color Manual, Lessons 3 and 4.
3. }

NOTE. — Ask pupils to bring in sketches for border designs next Friday, using historic ornament as detail.

Twenty-ninth Week.

1. } COLOR. Color Manual, Lessons 5 and 6.
2. }

3. COLOR. Color Manual, Lesson 7.

NOTE. — Criticise border designs.

Thirtieth Week.

1. COLOR. Color Manual, Lesson 8.

2. } COLOR. Color Manual, Lessons 9 and 10.
3. }

NOTE. — Border designs must be ready for use Monday.

Thirty-first Week.

1. } DRAWING. Color Manual, Lessons 11 and 12.
2. }

3. COLOR. Color Manual, Lesson 13.

Thirty-second Week.

1. } COLOR. Color Manual, Lessons 14 and 15.
2. }

3. DRAWING. Place a spray of leaves horizontally at the back of the desk, and sketch on the slate.

NOTE. — Each pupil hand in next Friday a border and also a simple radial design, using plant forms as detail.

Thirty-third Week.

1. DRAWING. Place a spray of foliage horizontally at the back of the desk, and draw in the book, page 22.

2. } DRAWING. Place sprays of leaves and flowers in bottles of moist
3. } sand, and draw in the book, page 22.

NOTE. — Criticise the designs and have border design ready for use on Monday.

Thirty-fourth Week.

1. } DRAWING. Draw in the book, page 23, the border design.
2. }

NOTE. — Radial designs must be ready for use on Friday.

3. DRAWING. Draw in the book, page 23, the radial design. Two periods.

Thirty-fifth Week.

1. DRAWING. Complete the radial design.
2. } CUTTING. Color Manual, Lessons 16 and 17.
3. }

Thirty-sixth Week.

1. }
2. } COLOR. Color Manual, Lessons 18, 19, and 20.
3. }

OUTLINE OF LESSONS.

Paper if preferred may be used instead of the slate.

EIGHTH YEAR.

First Week.

1. DRAWING. Place a large hoop horizontally at the front of the room, and above the level of the eye. Draw on the slate.

2. DRAWING. Place large objects upon boards across the aisles, and draw on the slate.

3. MODELING. Model a sphere 2″ in diameter, and cut from it a small section, as illustrated.

NOTE. — All references under "Drawing" are to the pupils' drawing books.

Second Week.

1. DRAWING. Theory. Book, page 10. See "Free-hand Drawing," Lesson XIV, page 65.

2. DRAWING. Sketch on the slate a large vase or lamp.

3. DRAWING. Sketch on the slate the historic ornament Fig. 40, 41, or 42.

Third Week.

1. DRAWING. Draw on the slate the objects illustrated.

2. DRAWING. Draw on the slate the object illustrated.

3. DRAWING. Draw in the book, page 10, the object drawn Wednesday.

Fourth Week.

1. DRAWING. Sketch on the slate the historic ornament, Fig. 40, 41, or 42.

2. DRAWING. Place large objects above the eye, and draw on the slate.

3. DRAWING. Sketch on the slate any corner of the schoolroom.

Fifth Week.

1. } DRAWING. Draw in the book the historic ornament, page 11.
2. }

3. DRAWING. Draw in the book, page 12, a large vase or lamp. Two periods.

Sixth Week.

1. DRAWING. Complete the drawing begun in the book.

2. } DRAWING. Place large objects above the eye, and draw in the book,
3. } page 12.

Seventh Week.

1. DRAWING. Sketch on the slate the historic ornament, Fig. 43, 44, or 45.

2. DRAWING. Sketch on the slate a group of objects.
3. DRAWING. Draw on the slate single objects from memory, and test as explained the Fourteenth Week, Fifth Year.

Eighth Week.

1. GEOMETRY. Free-hand review of the problems previously studied.

2. } GEOMETRY. Problems 19, 20, and 21. Book page 1. See "Mechan-
3. } ical Drawing" for explanations of problems.

Ninth Week.

1. } GEOMETRY. Problems 22, 23, and 24. Book, page 1.
2. }

3. WORKING DRAWINGS. Free-hand working drawings with dimensions. Top and front views of a tea or coffee pot. See "Mechanical Drawing," Fig. 66.

Tenth Week.

1. } WORKING DRAWINGS. Book, page 2. Top and front views of a tea or
2. } coffee pot.

3. WORKING DRAWINGS. Free-hand working drawings with dimensions. Front, top, and left-side views of a flatiron. See "Mechanical Drawing," Fig. 68.

Eleventh Week.

1. } WORKING DRAWINGS. Book, page 3. Front, top, and left-side views
2. } of a flatiron.

3. WORKING DRAWINGS. Free-hand working drawings with dimensions. Front and left-side views and horizontal section of a tool handle. See "Mechanical Drawing," Fig. 67.

Twelfth Week.

1. } WORKING DRAWINGS. Book, page 2. Front, and left-side views, and
2. } horizontal section of a tool handle.

3. WORKING DRAWINGS. Free-hand working drawings with dimensions. Front view, and longitudinal and cross sections of a spool. See "Mechanical Drawing," Fig. 69.

Thirteenth Week.

1. } WORKING DRAWINGS. Book, page 4. Front view, and longitudinal
2. } and cross sections of a spool.

3. WORKING DRAWINGS. Book, page 5. Front and top views of tablets combined as illustrated. See "Mechanical Drawing," Fig. 70.

Fourteenth Week.

1. WORKING DRAWINGS. Book, page 5. Front, top, and right-side views of tablets combined as illustrated. See "Mechanical Drawing," Fig. 72. The triangle may be combined with either an oblong or a square.
2. WORKING DRAWINGS. Book, page 6. Front and top views of tablets combined as illustrated. See "Mechanical Drawing," Fig. 71.
3. WORKING DRAWINGS. Book, page 6. Front, top, and right-side views of tablets combined as illustrated. See "Mechanical Drawing," Fig. 73.

Fifteenth Week.

1. WORKING DRAWINGS. Book, page 7. Front, top, and left-side views of tablets combined as illustrated. See "Mechanical Drawing," Fig. 74.

2. } WORKING DRAWINGS. Book, page 8. Front, top, and right-side views
3. } of tablets combined as illustrated. See "Mechanical Drawing," Fig. 75.

Sixteenth Week.

1. } WORKING DRAWINGS. Book, page 9. Front, top, and right-side views
2. } of tablets combined as illustrated. See "Mechanical Drawing," Fig. 76.

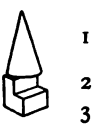
3. DRAWING. Theory. Book, page 13. See "Free-hand Drawing," Lesson XV, page 66.

Seventeenth Week.

1. DRAWING. Draw in the book, page 14, the large object illustrated.

2. DRAWING. Place a chair, table, or stool at the front of the room or on the teacher's desk, and sketch on the slate.
3. DRAWING. Sketch on the slate a single piece of furniture.

Eighteenth Week.



1. DRAWING. Draw on the slate the large objects illustrated.

2. } DRAWING. Rearrange the objects drawn Monday, and draw
3. } in the book, page 14.

Nineteenth Week.

1. } DRAWING. Draw in the book, page 15, the large objects
2. } illustrated, or similar ones.

3. DRAWING. Draw in the book, page 16, the historic ornament. Two periods.

Twentieth Week.

1. DRAWING. Complete the ornament begun in the book.
2. DRAWING. Sketch on the slate a single piece of furniture.

3. DRAWING. Sketch on the slate the group illustrated.

Twenty-first Week.

1. } DRAWING. Rearrange the objects drawn Friday, and draw in the
2. } book, page 17.

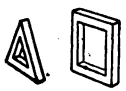
3. DRAWING. Sketch on the slate the historic ornament, Fig. 46, 47, or 48.

Twenty-second Week.

1. } DRAWING. Draw in the book, page 18, a stool or chair.
2. }

3. DRAWING. Theory. Book, page 19. See "Free-hand Drawing," Lesson XVI, page 67.

Twenty-third Week.



1. DRAWING. Draw on the slate the square or triangular frame.

2. } DRAWING. Draw in the book, page 18, a single piece
3. } of furniture.

Twenty-fourth Week.

1. } DRAWING. Draw in the book the historic ornament,
2. } page 20.

3. DRAWING. Draw on the slate the object illustrated.

Twenty-fifth Week.

1. } DRAWING. Draw in the book, page 21, a corner of the school-room.
2. }

3. COLOR. Color Manual, Lesson 1.

Twenty-sixth Week.

1. } COLOR. Color Manual, Lessons 2 and 3.
2. }

3. COLOR. Color Manual, Lesson 4.

Twenty-seventh Week.

1. COLOR. Color Manual, Lesson 5.

2. } COLOR. Color Manual, Lessons 6 and 7.
3. }

Twenty-eighth Week.

1. } COLOR. Color Manual, Lessons 8 and 9.
2. }

3. COLOR. Color Manual, Lesson 10.

Twenty-ninth Week.

1. DRAWING. Place a spray of leaves and flowers at the back of the desk, and sketch on the slate.

2. DESIGN. An illustrated talk by the teacher on principles of good design, showing examples of such, and illustrating to the pupils the manner in which plant forms may be used as detail. Teach balance.

NOTE. — Each pupil bring in next Wednesday sketches for a border, and also an elementary design, using conventionalized plant forms as units.

3. DRAWING. Place single small potted plants on boards across the aisles, and sketch on the slate.

Thirtieth Week.

1. } DRAWING. Place single potted plants on boards across the aisles, and
2. } draw in the book, page 22.

NOTE. — Sketches for designs are to be criticised, and the border designs are to be ready for use on Friday.

3. DRAWING. Transfer the border design to the book, page 23. Two periods.

Thirty-first Week.

1. DRAWING. Complete the border design.

NOTE. — Elementary design must be ready for use next Monday.

2. } DRAWING. Draw in the book, page 22, from a small potted plant.
3. }

NOTE. — Ask pupils to hand in next Friday sketches of bisymmetric or balanced designs, using plant forms as detail. This is for use in color work.

Thirty-second Week.

1. } DRAWING. Draw the elementary design in the book, page 23.
2. }

3. COLOR. Color Manual, Lesson 11.

NOTE. — Designs to be criticised and ready for use next Friday.

Thirty-third Week.

1. COLOR. Color Manual, Lesson 12.
2. COLOR. Color Manual, Lesson 13.
3. DRAWING. Color Manual, Lesson 14.

NOTE. — Have pupils collect, and bring for approval during the following week, samples of wall-paper friezes, to be copied in colors.

Thirty-fourth Week.

1. DRAWING. Color Manual, Lesson 15.
2. }
3. } COLOR. Color Manual, Lessons 16 and 17.

NOTE. — Wall-paper friezes must be ready for use next Wednesday.

Thirty-fifth Week.

1. COLOR. Color Manual, Lesson 18.
2. }
3. } DRAWING. Color Manual, Lessons 19 and 20.

Thirty-sixth Week.

1. }
2. } COLOR. Color Manual, Lessons 21, 22, and 23.
3. }